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Crowell & Moring Intellectual Property Group 1001 Pennsylvania Avenue NW Washington, DC 20004-2595				
EXAMINER				
SHECHTMAN, SEAN P				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/507,520

**Applicant(s)**

ONIZAWA ET AL.

**Examiner**

Sean P. Shechtman

**Art Unit**

2121

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 February 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 4, 5, 10 and 12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 4, 5, 10 and 12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Specification***

1. 35 U.S.C. 112, first paragraph, requires the specification to be written in "full, clear, concise, and exact terms." The specification is replete with terms which are not clear, concise and exact. The specification should be revised carefully in order to comply with 35 U.S.C. 112, first paragraph. Examples of some unclear, inexact or verbose terms used in the specification are: Referring to, for example, page 56, paragraph 3, it is unclear what is an offline process and an assembly entry process. Referring to page 24, paragraph 4 – page 25, paragraph 1, and page 27, paragraph 2, the difference between the number of vehicles successively arranged and the successive building sequence is unclear. Referring to page 27, paragraph 1, "until three at minimum" is not clear. Referring to, for example, pages 2-7, it is unclear how a point or process can contain a building sequence to be propagated and furthermore it is unclear how preceding and succeeding processes would accept or receive such propagated sequence.

### ***Claim Objections***

2. Claim 12 is objected to because of the following informalities: "an lead-time shifting" should be "lead-time shifting". Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1, 4, 5, 10 rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for an offline point, does not reasonably provide enablement for an offline process. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make or use the invention commensurate in scope with these claims. The specification teaches an offline point as a point in a manufacturing line between two processes of the manufacturing line (See fig. 5 of the instant specification), however, the specification fails to teach an offline process. Therefore, the specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make or use the invention commensurate in scope with these claims.

Claims 1, 4, 5, 10, 12 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claims 1, 4, 5, 10, 12 recite that the building sequence is in an offline point or process. The specification teaches a processing unit prepares a building sequence, however the specification is silent in providing how one of ordinary skill in the art would provide the building sequence inside a process or point of a manufacturing line, nor does the specification provide for a processing unit inside any processes or point of a manufacturing line. Therefore, the claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claims 1, 4, 5, 10, 12, are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claims 1, 4, 5, 10, 12, recite propagating the building sequence from inside a point or process to preceding and succeeding processes. The specification teaches a processing unit appears to be connected to another device by way of a LAN device of the input/output units (See Fig. 1 of the instant specification). However the specification is completely silent in teaching how or where one of ordinary skill in the art would propagate the building sequence from inside a point or process to preceding and succeeding processes, nor does the specification provide for how preceding and succeeding processes would accept or receive such propagated sequence. Therefore, the claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claims 1, 4, 5, 10, 12, are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claims 1, 4, 5, 10, 12, recite an offline point corresponds to an assembly completion process. The specification teaches an offline point is a point in a manufacturing line between two processes of the manufacturing line (See fig. 5 of the

instant specification). However the specification is completely silent in teaching that offline point corresponds to an assembly completion process. Therefore, the claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1, 4, 5, 10, 12, are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). The term "offline" in claims 1, 4, 5, 10, 12 is used by the claim to mean "a point in a manufacturing line between two processes of the manufacturing line" (See fig. 5 of the instant specification), while the accepted meaning is "something occurring away or aside from a manufacturing line." The term is indefinite because the specification does not clearly redefine the term.

Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine

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the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). The term "process" in claims 1, 4, 5, 10, 12 is used by the claim to mean "something which accepts or receives the building sequence", while the accepted meaning is "one or more steps." The term is indefinite because the specification does not clearly redefine the term.

Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). The term "point" or "process" in claims 1, 4, 5, 10, 12 is used by the claim to mean "something which contains the building sequence to be propagated", while the accepted meaning is "an area" or "one or more steps", respectively. The term is indefinite because the specification does not clearly redefine the term.

Claim 1 recites the limitation "the vehicle information prepared by said initial offline sequence preparing unit" in paragraph 6. There is insufficient antecedent basis for this limitation in the claim.

Referring to claim 1, paragraph 7, it is unclear how the sequence evaluating unit evaluates the developed building sequence by determining the degree of satisfaction of the prepared building sequence, i.e., by evaluating the prepared building sequence.

Claim 1 recites the limitation "the successive building sequence" in paragraph 8. There is insufficient antecedent basis for this limitation in the claim.

Claim 1 recites the limitation "the entire process" in paragraph 9. There is insufficient antecedent basis for this limitation in the claim.

Referring to claim 1, paragraph 11 recites the limitation "the building sequence", however paragraphs 1-10 recites the limitations of several building sequences. Therefore the recitation of "the building sequence" in the same or subsequent claim is unclear because it is uncertain which of the building sequences was intended (MPEP 2173.05(e)). Claim 4 contains similar limitations and is rejected for the same reasons.

Claim 12 recites the limitation "said input" in line 6. There is insufficient antecedent basis for this limitation in the claim. For purposes of examination, it will be assumed to be an input.

Due to the number of 35 USC § 112 rejections, the examiner has provided a number of examples of the claim deficiencies in the above rejections, however, the list of rejections may not be all inclusive. Applicant should refer to these rejections as examples of deficiencies and should make all the necessary corrections to eliminate the 35 USC § 112 problems and place the claims in proper format.

Due to the vagueness and a lack of clear definition of the terminology and phrases used in the specification and claims, the claims have been treated on their merits as best understood by the examiner.

***Claim Rejections - 35 USC § 102***



The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 4, 5, 10, 12 are rejected under 35 U.S.C. 102(b) as being anticipated by DE 19902056 to Daferner, translated into English (hereinafter referred to as Daferner).

Referring to claims 10, 12, Daferner teaches a building sequence planning system/method for an automobile production line (page 10, paragraph 5), said system comprising an input unit for inputting information of vehicles to be manufactured (page 20, paragraph 4; Page 10, paragraph 5), a processing unit for deciding an optimum building sequence based on the vehicle information inputted through said input unit (Page 20, paragraph 5), and an output unit for externally outputting a building sequence schedule decided by said processing unit (Page 21, paragraph 1),

wherein said processing unit prepares a vehicle building sequence (Fig. 2), determines a degree of dissatisfaction of the prepared building sequence, as a penalty value (Page 19, paragraph 3 – Page 20, paragraph 1), in accordance with restriction conditions which are inputted through said input unit and are imposed when building the vehicles into work (Page 10, paragraph 6 – Page 11, paragraph 2), the restriction

conditions including leveling in distribution of vehicles having the same specifications (Page 16, paragraph 2), a minimum building interval of vehicles having particular specifications (Page 14, paragraph 2), and decides a building sequence with a minimum penalty by preparing a plurality of building sequences and determining the penalty value for each building sequence with respect to the restriction conditions (Page 19, paragraph 3 – Page 20, paragraph 1), and

wherein said processing unit propagates the building sequence in an offline process, which corresponds to an assembly completion process, to preceding and succeeding processes with lead-time shifting by employing the number of vehicles residing or accumulated between two processes, thereby deciding the building sequence for each of the preceding and succeeding processes (Page 13, paragraph 1; Page 11, paragraph 2, shifting of orders 3, 4, 5 for air conditioning assembly team to be at least 50 clock cycles apart, thereby shifting the time for which the processing of orders 3, 4, 5 will be completed thereby shifting the lead-time).

Claim scope is not limited by claim language that suggests or makes optional but does not require steps to be performed (MPEP 2111.04) and the claimed condition of considering the number of vehicles successively loaded would as a restriction condition not ever reasonably occur in the prior art reference, thereby failing to limit the claim scope of the restriction conditions.

Referring to claim 1, Daferner teaches, a building sequence planning system for an automobile production line, said system comprising:

an input unit for inputting information of vehicles to be manufactured (page 20, paragraph 4; Page 10, paragraph 5), a processing unit for deciding an optimum building sequence based on the vehicle information inputted through said input unit (Page 20, paragraph 5), and an output unit for externally outputting a building sequence schedule decided by said processing unit (Page 21, paragraph 1),

an initial offline sequence preparing unit for preparing an initial vehicle building sequence of the automobile based on the vehicle information inputting said input unit, an initial lead-time developing unit for developing the building sequence in an offline point for the building sequence of the automobile based on the vehicle information prepared by said initial offline sequence preparing unit, wherein said offline point corresponds to an assembly completion process, a sequence evaluating unit for evaluating the building sequence developed by determining a degree of dissatisfaction of the prepared building sequence, as a penalty value, in accordance with restriction conditions, an offline sequence preparing unit for preparing another pattern of the successive building sequence in an offline process, an evaluation determining and storing unit for deciding a building sequence with a minimum penalty based on the penalty value evaluated by said sequence evaluation unit (Page 19, paragraph 3 – Page 20, paragraph 1),

a lead-time developing unit for preparing the successive building sequence for the entire process for another pattern of the successive building sequence prepared by said offline sequence preparing unit by using a lead-time shifting by employing the number of vehicles residing or accumulated between two processes, and wherein said

processing unit propagates the building sequence in an offline point, which corresponds to an assembly completion point, to preceding and succeeding processes with lead-time shifting by employing the number of vehicles residing or accumulated between two processes, thereby deciding the building sequence for each of the preceding and succeeding processes (Page 13, paragraph 1; Page 11, paragraph 2, shifting of orders 3, 4, 5 for air conditioning assembly team to be at least 50 clock cycles apart).

4. A building sequence planning system for an automobile production line according to Claim 1, wherein, in a mixed line including branches and joints (Page 10, paragraph 6 – Page 11, paragraph 1), said lead-time developing unit calculates a different lead time for each vehicle by employing the number of vehicles residing or accumulated between two processes, and propagates the building sequence to preceding and succeeding processes with lead-time shifting, thereby deciding the building sequence for each of the preceding and succeeding processes (Page 13, paragraph 1; Page 11, paragraph 2, shifting of orders 3, 4, 5 for air conditioning assembly team to be at least 50 clock cycles apart).

5. A building sequence planning system for an automobile production line according to Claim 4, wherein, for a vehicle which has to pass a line twice because of work for two-tone color painting, the lead time is modified by adding a time or the number of vehicles (Page 15, paragraph 2).

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6. Upon further review, claims 1, 4, 5, 10, 12 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Pat. No. 6,546,302 to Bergeon (hereinafter referred to as Bergeon).

Referring to claim 1, 10, 12, Bergeon teaches a building sequence planning system for an automobile production line, said system comprising:

an input unit for inputting vehicle information of vehicles to be manufactured (Col. 2, lines 55-62),

a processing unit for deciding an optimum building sequence based on the vehicle information inputted through said input unit (Col. 2, lines 62- Col. 3, lines 45), and

an output unit for externally outputting a building sequence schedule decided by said processing unit (Col. 3, lines 15-32), wherein said processing unit includes

an initial offline sequence preparing unit for preparing an initial vehicle building sequence of the automobile based on the vehicle information inputting said input unit (Col. 3, lines 3-14),

an initial lead-time developing unit for developing the building sequence in an offline point for the building sequence of the automobile based on the vehicle information prepared by said initial offline sequence preparing unit, wherein said offline point corresponds to an assembly completion process (Col. 3, lines 3-14),

a sequence evaluating unit for evaluating the building sequence developed by determining a degree of dissatisfaction of the prepared building sequence, as a penalty value, in accordance with restriction conditions (Col. 5, line 48 – Col. 6, line 6),

an offline sequence preparing unit for preparing another pattern of the successive building sequence in an offline process (Col. 5, line 48 – Col. 6, line 6),

an evaluation determining and storing unit for deciding a building sequence with a minimum penalty based on the penalty value evaluated by said sequence evaluation unit (Col. 5, line 48 – Col. 6, line 6),

wherein said processing unit prepares a vehicle building sequence, determines a degree of dissatisfaction of the prepared building sequence, as a penalty value, in accordance with restriction conditions which are inputted through said input unit and are imposed when building the vehicles into work (Col. 2, lines 48-65; Fig. 2, element 44; Col. 5, lines 47 – Col. 6, line 6), the restriction conditions including leveling in distribution of vehicles having the same specifications, a minimum building interval of vehicles having particular specifications, and a maximum succeeding vehicle number and a minimum succeeding vehicle number in successive building of the vehicles when the number of vehicles successively loaded is taken into consideration (Col. 3, lines 19-23), and decides a building sequence with a minimum penalty by preparing a plurality of building sequences and determining the penalty value for each building sequence with respect to the restriction conditions (Col. 5, line 48 – Col. 6, line 6), and

a lead-time developing unit for preparing the successive building sequence for the entire process for another pattern of the successive building sequence prepared by said offline sequence preparing unit by using a lead-time shifting by employing the number of vehicles residing or accumulated between two processes, and wherein said processing unit propagates the building sequence in an offline point, which corresponds

to an assembly completion point, to preceding and succeeding processes with lead-time shifting by employing the number of vehicles residing or accumulated between two processes, thereby deciding the building sequence for each of the preceding and succeeding processes (Col. 5, line 48 – Col. 6, line 6). The examiner respectfully submits that the swapping of vehicles in the sequence (Col. 5, lines 48 – Col. 6, line 6) would thereby shift the time for which the processing of these vehicles will be completed which would thereby shift the lead-time is lead-time shifting. The examiner respectfully submits that the swapping of vehicles in the sequence (Col. 5, lines 48 – Col. 6, line 6), wherein the sequence is of different procedures dependent upon the characteristics, options, and accessories of the vehicles (Col. 1, lines 14-28), wherein the sequence takes into account the number of vehicles without a specific option which are disposed between two vehicles containing that option (Col. 4, lines 19-22), wherein the generated sequences or schedules are communicated to the plant for most effective sequencing and scheduling (Col. 6, lines 7-14), is a lead-time developing unit for preparing the successive building sequence for the entire process for another pattern of the successive building sequence prepared by said offline sequence preparing unit by using a lead-time shifting by employing the number of vehicles residing or accumulated between two processes, and wherein said processing unit propagates the building sequence in an offline point, which corresponds to an assembly completion point, to preceding and succeeding processes with lead-time shifting by employing the number of vehicles residing or accumulated between two processes, thereby deciding the building sequence for each of the preceding and succeeding processes.

4. A building sequence planning system for an automobile production line according to Claim 1, wherein, in a mixed line including branches and joints, said lead-time developing unit calculates a different lead time for each vehicle by employing the number of vehicles residing or accumulated between two processes, and propagates the building sequence to preceding and succeeding processes with lead-time shifting, thereby deciding the building sequence for each of the preceding and succeeding processes (Col. 4, lines 19-26; Col. 5, lines 13-46).

5. A building sequence planning system for an automobile production line according to Claim 4, wherein, for a vehicle which has to pass a line twice because of work for two-tone color painting, the lead time is modified by adding a time or the number of vehicles (Col. 4, lines 19-26; Col. 5, lines 13-46).

### ***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sean P. Shechtman whose telephone number is (571)272-3754. The examiner can normally be reached on 9:30am-6:00pm, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on (571) 272-3819. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SPS

Sean P. Shechtman

February 27<sup>th</sup> 2008

/Sean P. Shechtman/  
Primary Examiner, Art Unit 2121